

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.(presently amended) A medical radiation device for interstitial treatments of photodynamic therapy comprising:

multiple radiation output ports, each adapted to accept a waveguide;

multiple radiation sources incorporated in said device and optically connected to said multiple radiation output ports; and

means to independently control power output levels emitted through each radiation output port, wherein said power output level can be controlled/set independently for each individual output port.

2.(original) The medical radiation device according to claim 1, wherein said radiation source comprises a diode unit, wherein said diode unit comprises at least two diode emitters.

3.(original) The medical radiation device according to claim 2, wherein said diode emitters are selected from the group consisting of a diode laser, a light-emitting diode, a superluminescent diode, a Master Oscillator Power Amplifier (MOPA) diode, and a tapered diode.

4.(presently amended) The medical radiation device according to claim 1, further comprising at least one power source connected to one or more said radiation sources and connected to said control means, wherein a power input from said at least one power source is controllable by said control means for each radiation source.

5.(original) The medical radiation device according to claim 1, wherein said control means is a computer.

6.(original) The medical radiation device according to claim 1, further comprising means to input power levels for each output port.

7.(original) The medical radiation device according to claim 1, wherein said control means comprises a memory unit to store information on treatments.

8. (canceled)

9.(original) The medical radiation device according to claim 1, further comprising a calibration means connected to said control means.

10.(original) The medical radiation device according to claim 9, wherein said calibration means comprises:

a port for accepting an emission end of a radiation delivery device;
means to measure a power output from said emission end; and
means to transmit power output information from said measurement means to said control means.

11.(original) The medical radiation device according to claim 10, wherein said measurement means is a photodiode.

12.(presently amended) A medical radiation system comprising:

the medical radiation device for interstitial treatments of photodynamic therapy of claim 1; and

multiple radiation delivery devices, wherein each radiation delivery device is optically connected to one of said radiation output ports.

13.(presently amended) The medical radiation system according to claim 12, wherein each said radiation delivery device comprises a waveguide selected from the group consisting on an optical fiber and an optical fiber bundle.

14.(presently amended) The medical radiation system according to claim 12, wherein each said radiation delivery device comprises means to insert an emission end of each said radiation delivery device individually into a treatment area.

15.(original) The medical radiation system according to claim 12, further comprising a calibration means connected to said control means.

16.(original) The medical radiation system according to claim 15, wherein said calibration means comprises:

a port for accepting an emission end of a radiation delivery device;
means to measure a power output from said emission end; and
means to transmit power output information from said measurement means to said control means.

17.(original) The medical radiation system according to claim 16, wherein said measurement means is a photodiode.